RED IMPORTED FIRE ANT (HYMENOPTERA: FORMICIDAE) 
INFESTATION OF MOTORIZED VEHICLES

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Red imported fire ants (RIFA), Solenopsis invicta Buren, typically nest outdoors in open grassy or weedy habitats where their large, conical-shaped mounds are usually oriented toward maximum solar radiation. Although red imported fire ants are not considered to be an indoor pest, invasion of homes and other buildings does occasionally occur (Lyle & Fortune 1948, Green 1962, Bruce et al. 1971). Certain environmental conditions, such as favorable temperature, relative humidity and the presence of food and water, are necessary for the colony to survive indoors. Anecdotal evidence for infestation of tractor-trailers and other trucks also exists. We present here three case histories of RIFA invasion and successful colony establishment in motorized vehicles.

In the first case, a 1987 Winnebago Chief 22 motor home owned by one of the authors (DJA) was found infested with RIFA on August 18, 1989. The vehicle was based near Bogalusa, LA where it had been operated for two months prior to discovery of the infestation. More than 500 workers were observed over a 5-day period. Apparently the colony was nesting in the insulation in the walls, however no queen or immatures were observed. Colony relocation within the camper, apparently in response to elevated temperature, was noted several days after the ants were first detected. The infestation was eliminated with several applications of aerosol synergized pyrethrins in combination with thermal smoke bombs.

In case number 2, the owner of a 1987 Plymouth Sundance reported a possible RIFA infestation in his automobile to one of the junior author’s (TCL) on May 19, 1991. A thorough inspection revealed that a colony of RIFA had established residence under the hood of the car. A considerable amount of organic matter, primarily leaf mulch, had accumulated in a depressed area about 17.5 cm wide running the length of the top of the firewall. The colony was located in this mulch. The queen was not detected, but >100 workers and immatures were observed. Foraging workers were also seen within the passenger compartment. An interview with the owner of the automobile revealed that the vehicle was usually parked at his residence in Gulfport, MS, however this site had received a considerable amount of rain during the prior 7 days. The entire coastal area of Mississippi experienced an exceptionally wet spring in 1991 and the ground at that time was saturated with water. The ant colony may have been forced from it’s original nest by the rising water, and sought refuge inside the automobile. Amdro® Fire Ant Bait was placed in a petri dish and set on the floorboard near the infestation. An inspection of the vehicle 72 hours post-treatment showed that no ants were present.

The third case was noted on December 6, 1992. The senior author detected a RIFA infestation in the engine area of a personally-owned 1986 Buick Regal automobile. This vehicle had been operated in southern Mississippi for the six months preceding the detection of the infestation. Road trips of 60 miles during this interval were frequent, as were shorter trips of 5 miles or less. Two to three hundred workers (both minors and majors), larvae, pupae and the queen were found in the air pollution control canister. This cylindrical-shaped device (about 10 x 15 cm) provided an ideal nesting site because a built-in foam filter had become saturated with water which provided the necessary moisture. Soil particles, sand, and other road debris had been used to construct a nest.
between the canister and the holding bracket. Food supply may have been dead insects which had collected on the engine radiator during part of routine highway usage. The colony was eliminated with a hard stream of water from a garden hose.

RIFA are notorious hitchhikers and arrived in the United States from South America through the port of Mobile, AL via shipping between 1933 and 1945 (Buren 1972). Range expansion through commercial shipment of infested plant nursery stock has been documented by Culpepper (1953). This continues today, with recent detection and subsequent elimination of infestations in California, Arizona, Virginia, and Maryland. The case histories listed here demonstrate that, while occurrences are infrequent, motor vehicles may also provide a mechanism for long distance dispersal of this highly adaptable insect.

**SUMMARY**

RIFA normally nest in open grassy or weedy habitats and, infrequently, they invade buildings and nest indoors. On at least 3 occasions they have successfully nested in motorized vehicles. This phenomenon may present an additional mechanism for artificial spread of RIFA.

**REFERENCES CITED**


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**THE STATUS OF HONEYDEW MELON AS A HOST OF ANASTREPHA GRANDIS (DIPTERA: TEPHRITIDAE)**

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Anastrepha species infest about 270 plant species of 41 families, breeding almost exclusively in fleshy fruits (Norrborn & Kim 1988). Although Anastrepha is an economically important genus, most species are poorly studied, and no hosts are known for many of its species. There are problems concerning the validity or interpretation of